

## FORMATION OF PLANAR STRAINED LAYERS

### Abstract

A structure and a method for forming the structure, the method including forming a compressively strained semiconductor layer, the compressively strained layer having a strain greater than or equal to 0.25%. A tensilely strained semiconductor layer is formed over the compressively strained layer. The compressively strained layer is substantially planar, having a surface roughness characterized in (i) having an average wavelength greater than an average wavelength of a carrier in the compressively strained layer or (ii) having an average height less than 10 nm.

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